out that my 1990 specimen is the third for Great Britain and the first for Kent. Finding the species at the same locality in two successive years would suggest that it is resident in this Kentish locality. I am grateful to Michael Chalmers-Hunt and the staff of the Natural History Museum for confirming the identity of these moths.— D. O'KEEFFE, 50 Hazelmere Road, Petts Wood, Orpington, Kent BR5 1PD.

Cold tolerance of the immature stages of *Autographa gamma* L. (Lep.: Noctuidae)

In the United Kingdom the Silver Y (*Autographa gamma* L.) is considered to have the status of an immigrant, appearing from spring to autumn (Skinner, 1984). Although a few cases of winter survival by moths have been proved, the earlier stages are believed to be unable to develop at low temperatures, larvae and pupae being killed by frost (Heath & Emmet, 1983).

In April 1991 I was shown an adult *gamma* which had been reared from larvae found by the Wooding family on 25.iii.1991 at Great Oakley, N. Essex (TM 1927). Two larvae had been found feeding on commercially grown Parsley (*Petroselinum crispum*) in an open field. The parsley crop had been cut back in autumn to promote new growth, as is the normal practice, and had been left exposed to the elements thereafter.

On being brought into a warm kitchen the larva spun up around 28.iii.1991 and the first moth emerged on 7.iv.1991.

At average English summer temperatures development from ovum to imago takes 45-50 days (Heath & Emmet *loc. cit.*). This period must presumably be increased at lower temperatures.

Only 60 days before the date of emergence of the first *gamma* N.E. Essex had experienced some of the coldest weather conditions in four years, with heavy snowfalls and daytime temperatures below freezing lasting for about one week. The local press reported a minimum of −4°C in the Colchester area, with −6°C being recorded at Stansted Airport on the same night (Norwich Weather Centre data).

Even allowing for the insulating effects of the snow and the accelerated development caused by the final stage larvae being brought into the warm, the early stages of *gamma* must, in some instances, be able to survive exposure to freezing temperatures and still complete their metamorphosis successfully.

I should like to thank Pat and Charlotte Wooding for bringing the moth to my attention, Brian Goodey for his advice and Norwich Weather Centre for temperature data.

References: Heath, J. & Emmet, A.M., 1983. *The Moths and Butterflies of Great Britain and Ireland* **10** Noctuidae (Part II) and Agaristidae. Harley. Skinner, B., 1984. *Colour Identification Guide to Moths of the British Isles.* Viking.—JERRY BOWDREY, Colchester Museum, 14 Ryegate Road, Colchester, Essex CO1 1YG.